جامعه صنعاء
كلية الطب والعلوم الصحية
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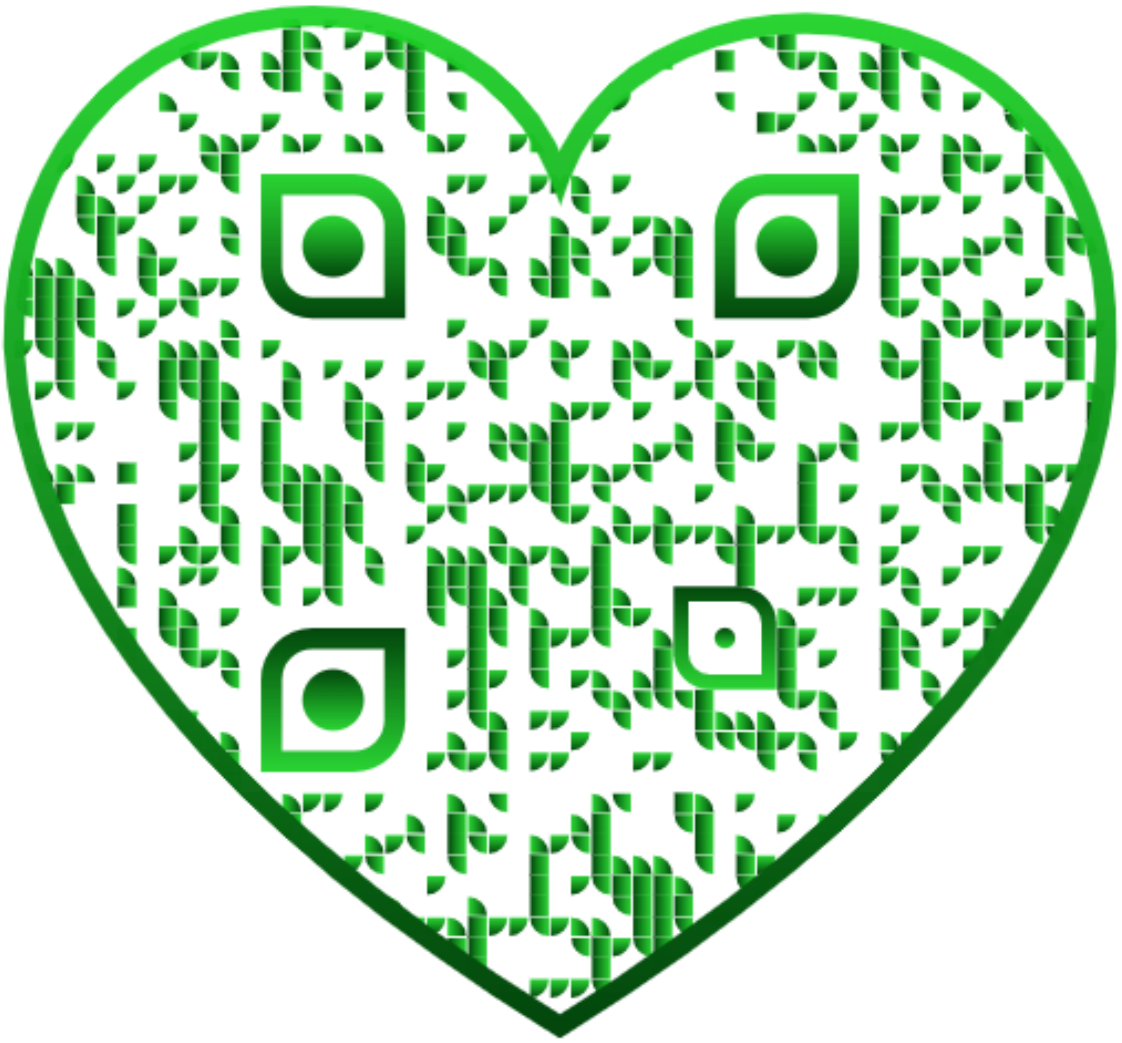
ENT
شفوي وعملي

اعداد وتنسيق
بشرى الشميري



Ear

1- Anatomy of temporal bone :-

♤ Temporal bones are situated at the sides and base of the skull, and lateral to the temporal lobes of the cerebral cortex.

The temporal bones are overlaid by the sides of the head known as the temples and house the structures of the ears.

The lower seven cranial nerves and the major vessels to and from the brain traverse the temporal bone.

- Parts of temporal seen below in the 4 question.

2- Anatomy of the Eustachian tube (ET) :-

3 Anatomy of external auditory meatus :-

♤ External acoustic meatus, external auditory meatus (EAM) :- (Latin: meatus acusticusexternus)

Is a tube running from the outer ear to the middle ear.

The adult human ear canal :-

- Extends from the pinna to the ear-drum.
- Is about 2.5 centimeters (1 in) in length and 0.7 centimeters (0.3 in) in diameter.

Structure :- The human ear canal is divided into two parts :-

1- Elastic cartilage part	**2- Bony part**
- Forms the outer third of the canal. - Its anterior and lower wall are cartilaginous - Whereas its superior and back wall are fibrous. - The cartilage is the continuation of the cartilage framework of pinna.	- Forms the inner two thirds. - Is much shorter in children and is only a ring (annulus tympanicus) in the newborn.

4- Anatomy of Internal auditory meatus :-

♤ Auditory meatus (also meatus acusticusinternus, internal acoustic meatus, internal auditory canal, internal acoustic canal, or IAC)

- Is a canal within the petrous part of the temporal bone of the skull between :-

1- Posterior cranial fossa.

2- Inner ear.

Structure :-

The opening to the Meatus :-is called :-

(Porusacusticusinternusor Its English translation and internal acoustic opening).

It is located :- - Inside the posterior cranial fossa of the skull.

- Near the center of the posterior surface of the petrous part of the temporal bone.

The size varies considerably; its margins are smooth and rounded.

The internal auditory meatus :- - Is short (about 1 cm).

- Runs laterally into the bone.

5- Parts of temporal bone :-

The temporal bone consists of four parts :-

1- Squamous part	- Is the largest. - Most superiorly positioned relative to the rest of the bone.
2- Mastoid part	- The zygomatic process is a long, arched process projecting from the lower region of the squamous part and it articulates with the zygomatic bone. - Postero-inferior to the squamous is the mastoid part.
3- Petrous part	- Fused with the squamous and mastoid parts. - Between the sphenoid and occipital bones lies the petrous part. - Which is shaped like a pyramid.
4- Tympanic part	- Is relatively small. - Lies inferior to the squamous part.

6- Definition and Types of the Mastoid air cells :-

Definition :- ……..

Types :- 1- Tip cells. 2- Retro-facial cell. 3- Perisinus.

4- Sinudural. 5- Periantral. 6- .....

7- Types of mastoid :-

1- Cellular 85%. 2- Acellular 15%. 3- Diploic.

8- Anatomy of mastoid air cells :-

9- Anatomy of Middle ear cleft :-

The middle ear is the portion of theearinternal to the ear-drum, and external to the oval window ofthe inner ear.

Also the mammalian middle ear contains three ossicles, which transfer the vibrations of the ear-drum into waves in the fluid and membranes of the inner ear.

The hollow space of the middle ear is also known as the tympanic cavity.

The auditory tube (also known as the Eustachian tube or the pharyngo-tympanic tube) joins the tympanic cavity with the nasal cavity (nasopharynx), allowing pressure to equalize between the middle ear and throat.

<u>The primary function of the middle ear</u> :-

Is to efficiently transfer acoustic energy from compression waves in air to fluid–membrane waves within the cochlea.

10- Content of middle ear cleft :-

1- Middle ear cavity. 2- Eustachian tube. 3- Mastoid air cells.

11- Definition of Middle ear :- (Don't write cavity it is cleft).

The middle ear is the portion of the ear internal to the eardrum and external to the oval window of the inner ear.

12- Meatus in the Middle Meatus (sinus) :- (Opening of sinuses)

1- Anterior :- Frontal. 2- Middle :- Ethmoidal.

3- Posterior :- Maxillary.

13- Symptoms of ear diseases :-

1- Deafness. 2- Discharge. 3- Deformity. 4- Tinnitus. 5- Vertigo.

6- Otalgia. 7- Facial paralysis. 8- Ear-ache. 9- Headache. 10- Swelling.

14- Signs of Complicated ear :-

1- ……. 2- ……. 3- ……. 4- …….

15- Ear examination and investigation :-

16- Enumerate Congenital disease of ear :-

1- Defect in size. 2- Defect in shape.

3- Pre-auricular cyst and fistula. 4- Accessory in shape.

17- Ear discharge(otorrhea)**:-**

Definition :- Is any fluid that comes from the ear.

Types :-

1- Chronic Otitis Media	Of different types depending on the cause of the infection whether it is "allergic, bacterial or fungal otitis".
2- Allergic otitis externa	Causes an irritation in ear canal and the discharge here is clear watery and odorless.
3- Bacterial otitis externa	Given raise to thick yellow-green purulent pus mixed With debris.
4- Fungal otitis (Otomycosis)	- Give rise to thick with yellow discharge (Similar to wet blotted paper). - This may contain black colored spores and hyphae.

18- Definition and theories of cholesteatoma:-

Definition :- It is keratinized stratified squamous Epithelium skin in the Middle ear.

- it is present Normally in External ear Only.

Theories :-

1- Migration theories (Most acceptable) :- Central or Attic or marginal perforation.

2- Retraction pocket theory.

3- Congenital cholestatoma theory.

4- Metaplasia theory.

19- What are the cholesteatoma in the middle ear and Where does it go (it's distraction):-

In cholesteatoma there is enzyme that destroyed bone as (1- Coreqanized 2- Protitive enzymes).

20- Why furuncle otitis External painful :-

Because the skin adherent to the cartilage and No space of the pus.

21- Definition and Causes of Referred pain in otalgia ? Referred pain:-

The neuro-anatomic basis of referred Ear ache rests within one of five general neural pathways.

The general ear region has a sensory innervation provided by four cranial nerves and two spinal segments.

Hence, pathology in other "non-ear" parts of the body innervated by these neural pathways may refer painto the ear.

These general pathways are:-

1- Via Trigeminal nerve [cranial nerve V]	(Rarely, trigeminal neuralgia can cause earaches. Oral cavity carcinoma can also cause referred ear pain via this pathway).
2- Via Facial nerve [cranial nerve VII]	This can come from the teeth, the temporo-mandibular joint (due to its close relation to the ear canal), or the parotid gland.
3- Via Glossopharyngeal nerve [cranial nerve IX]	This comes from the oropharynx, and can be due to : 1- Pharyngitis. 2- Pharyngeal ulceration. 3- Tonsillitis. 4- Carcinoma of the oropharynx (base of tongue, soft palate, pharyngeal wall, tonsils).
4- Via Vagus nerve [cranial nerve X]	This can arise from the laryngopharynx in carcinoma of this area, or from the esophagus in GERD.
5- Via the second and third spinal segments, C2 and C3.	

22- Definition of hematoma of ear auricle and it's Treatment :-

Definition :- Collection of blood between perichondrium and cartilage.

Treatment :-

1- Antibiotics.

2- Incision and evacuation with application of light bandage.

23- Indication, contraindication and complications of ear wash :-

Indication	**Contraindication**	**Complications**
1- Ear wax. 2- Foreign body. 3- Otomycosis.	1- Perforation :- - Traumatic. - Pathological as CSOM. 2- Foreign body :- - Impacted. - Vegetable. 3- Otitis external :- - Bacterial. - Viral.	1- Injury of auditory canal. 2- Infection (otitis media or otitis externa). 3- Stimulation of inner ear. 4- Stimulation (vagal stimulation).

24- Definition of otitis media :-

Acute inflammation of Ml of middle ear cleft.

25- Definition, Types and treatment of Otitis media:-

Definition :- Acute inflammation of Ml of middle ear cleft.

Types :-

A- Acute :- 1- Acute otitis media without effusion. 2- Acute otitis media with effusion.
3- Aero otitis media. 4- Acute viral otitis media.

B- Chronic :- 1- Chronic suppurative otitis media (FR and AA).
2- Tuberculous otitis media. 3- Syphilitic otitis media.

Treatment :-

1- Oral and topical pain killers are effective to treat the pain caused by otitis media.
2- Decongestants and antihistamines (either nasal or oral) are Not recommended due to the lack of benefit and concerns regarding side effects.
3- Antibiotics.
4- Tympanostomy tubes ("grommets") :- Are recommended in those people who have three or more episodes of acute otitis media in 6 months or four or more in a year, with at least one episode or more attacks in the preceding 6 months.

*In chronic cases with effusions :- Insertion of tympanostomy tube into the eardrum reduces recurrence rates in the 6 months after placement but has little effect on long-term hearing.

26- Classification of infective otitis Externa:-

A- Viral O.E :-	B- Bacterial O.E :-	C- Fungal :-
- Herpes simplex.	- Localized :- Staphylococcal.	- Aspergillusniger.
- Herpes zoster.	- Diffuse :- Diffuse inflammation.	- Candida albicans.
- Bollousmyringitis.	- Malignant :- Pseudomonas auerginosa.	

27- Types of bacterial otitis externa:-

A- Localized (furuncle) :- B- Diffuse :- C- Malignant :-

- Very painful. - All the canal. - In immunocomporomised patient.
- In ext. 1/3 = in hair follicular. - Caused by pseudomonaseaergenosa.

28- Types of Fungal in ear :-

1- Aspergillusniger. 2- Aspergillusflarus. 3- Candida albicans.

29- Classification of otitis externa:-

A- Reactive :- Eczema.

B- Infective :-

1- Bacterial :- 2- Viral :- 3- Fungal :-

- Localized :- Staph. - Herpes Simplex virus (HSV) - Otomycosis.
- Diffuse. - Herpes zoster (HZ).
- Malignant :- Pseudomonaseaurgenosa.

30- Types of acute otitis media (A.O.M) :-

1- Eustachain tube catarrh O.M. 2- Middle ear catarrh O.M. 3- Suppurative O.M.

4- Perforation O.M. 5- Recovery O.M.

31- Stages of acute otitis media and Treatment of 3rd stage :-

	Stage 1	**Stage 2**	**Stage 3**	**Stage 4**
	Eustachian tube catarrh :- (= inflammation of E.T lead to obstruction of E.T).	Middle ear catarrh :- (= Effusion in Middle ear).	Suppurations :- (= Accumulation of pus). - Symptoms its Peak. = Sever → fever, pain, + decrease hearing.	Perforation :- (Not treatment) Blood and pus exit from perforated tympanic membrane (T.M) lead to :- - Symptoms decrease. - Loss of hearing.
Appearance	Retracted of tympanic membrane (T.M).	Congenital tympanic membrane (T.M) [Blood vessel may appear].	Bulging of tympanic membrane (T.M).	Perforated tympanic membrane (T.M).
Treatment			....	

32- Definition and complication of acute otitis media :-

Definition :- ……

Complication :-

33- Classification of chronic otitis media :-

A- Non-suppurative otitis media :-

1- Secretory OM.

2- Adhesive OM.

B- Suppurative otitis media :-

1- Safe CSOM (Tubo-tympanic).

2- Unsafe CSOM (Attico-antral).

34- Classification of chronic suppurative otitis media :-

1- Tubotympanic (T.T) :- Safe.

2- Atticoantral (A.A) :- Unsafe.

35- Different between 2 types of chronic specific otitis media :-

	A- Safe CSOM (T.T)	**B- Unsafe CSOM (A.A)**
Discharge	- Intermittent. - Profuse. - Mucopurulent.	- Persistent. - Scanty. - Purulent.
Perferation	- Central (perforation Anterior in pars tansa). - Cholestoma and fistula Does Not present. - Granulation tissue and Polyp present (+).	- Marginal or Attic (perforation Postero-superior part). - Cholestoma always present. - Fistula may be present. - Granulation tissue and Polyp present (++).
Organism	Pseudomonas aurgenosa.	Pseudomonas auerginosa.
Complications	Less common.	More common Complication.
Treatment	Tympanoplasty.	Radical mastoidectomy.

36- Offensive discharge in What type of otitis media :-

Unsafe type (CSOM).

37- Cranial complications of otitis media :-

1- Mastoiditis :- (Inflammation of mastoid antrum and air cells).

2- Labyrinthitis :- (Inflammation of inner ear).

3- Petrositis :- (Inflammation of air cells in the petrous apex).

4- Otitic facial paralysis.

38- Complication of Suppurative O.M :-

A- Cranial complications	B- Intra-cranial complications	C- Extra-Cranial complications
1- Mastoiditis. 2- Labyrinthitis. 3- Petrosis. 4- Otitic facial paralysis.	1- Extra-dural abscess. 2- Sub-dural abscess. 3- Meningitis. 4- Brain abscess (Temporal or Cerebellar). 5-Lateral sinus thrombophlebitis. 6- Otitic hydrocephalus.	1- Otitisexterna. 2- Citteli's abscess. 3- Bezold's abscess. 4- Jugular Vein thrombosis. 5- Retro-pharyngeal abscess.

39- 2 types of brain abscess as complication of otitis media :-

40- Manifestation of brain abscess :-

41- Treatment of attico-antralsuppurative otitis media :-

- The Treatment is Surgical. - The classic Treatment is Radio-mastoid-ectomy.

42- Treatment of secretory otitis media :-

A- Medical :-

1- Treatment of cause :- infections or adenoid

2- Systemic Antibiotic :- To prevent recurrent infection.

3- Steroids.

4- Mucolytics :- To dissolve mucoid secretion.

5- Decongestant nasal drop :- To open E.T.

B- Surgical :- if the medical failed. → Myringo-tomy.

43- Definition, causes, Clinical features and management of Localized otitis externa:-

Definition :- Inflammations of the external canal (otitis externa) : is the generic term applied to all inflammatory condition of the external meatal skin.

Etiology :- The a etiology can be divided into two ground division but more than one factor may present at the same time :-

1- Infective due to :-

1- Bacterial :- a- Localized (circumscribed) : Furunculosis.

b- Diffuse infection. c- Malignant otitis externa.

2- Fungal.

3- Viral :- a- Bullous myringgitis. b- Herpes zoster. c- Herpes simplex.

2- Reactive caused by :- 1- Eczema. 2- Seborrheic dermatitis.

3- Neuro-dermatitis.

Clinical features :-

1- Pain in the ear (may be severe and resistant to analgesics).

2- Discharge (may be sero-purulent and foetid due to osteitis).

3- Granulations (may be seen in the meatus, especially on it's floor).

4- Cranial nerve paralysis may affect the (vii, ix, x , xi and xii) the cranial nerve.

*Rarely Gradenigo's syndrome may result from involvement of the 5th and 6th cranial nerves.

Treatment :-

A- Medical :- 1- Control of diabetes. 2- Anti-pseudomonal drugs locally and generally.

B- Surgical :- May range from :-

1- Removal of granulations. To → 2- Radical mastoidectomy.

44- What is the Malignant otitis externa, complication and Treatment :-

Definition :- a pseudomonas infection, may be fatal, occurring in the immuno-suppressed patient.

Complications :- 1- …… 2- …….. 3- …….

Treatment :-

A- Medical :- 1- Control of diabetes.

2- Anti-pseudomonal drugs locally and generally.

B- Surgical :- May range from :-

1- Removal of granulations. To → 2- Radical mastoidectomy.

45- Definition, clinical features and treatment of Otitic barotrauma (Aero otitis media) :-

Definition :- Is non-suppurative condition resulting from failure of Eustachian tube to maintain middle ear pressure at atmospheric level.

Or

It is Trauma to the ear due to the development of negative pressure in the middle ear cleft, relative to the Environment.

Clinical features :-

1- Severe earache, Hearing loss (is usually conductive but Sensori-neural type of loss may be also seen) and Tinnitus are common complaints.

2- Tympanic membrane appears Retracted and Congested. (it may get Rupture).

3- Middle ear show air bubbles or hemorrhagic effusion.

Treatment :- - The aim is to Restore middle ear aeration.

In mild cases :-

1- Decongestant nasal drop Or oral nasal Decongestant with Antihistamines are helpful.

2- In presence of fluid Or failure of the above methods, (Myringotomy may be performed).

46- Definition of Myringotomy :-

……

47- Indication of Myringotomy :-

A- Acute suppurative otitis media :- For duringe

1- Bulging drum.

2- Small and light up perforation.

3- Facial paralysis and Mastoditis.

B- Otitis baro-trauma.

C- Secretory otitis media.

48 Definition, Clinical manifestation and Management of Petrositis:-

Definition :- It is inflammation of air cells in petrous apex, more in DM patient after OM.

Clinical manifestation :- **Gradenigo's triad** [Discharge, 5th CN palsy (facial pain), 6th CN palsy (diplopia and squint)].

Management :-

Investigation :- 1- PTA (CNL). 2- Culture. 3- CT.

Treatment :- 1- Antibiotics. 2- Radical mastoidectomy.

49- Gradenigo's triad :-

1- Discharge ear. 2- Facial nerve pain. 3- Diplopia.

50- Gressenger's sign :-

Tenderness behind the ear (important).

51- Gradenigo's syndrome :-

1- Discharge. 2- Trigeminal pain.

3- 5th CN palsy (facial pain). 4- 6th CN palsy (diplopia and squint).

52- Definition and etiology of Meniere's disease :-

Definition :- It is hydrops of membranous labyrinth leading to attacks of Vertigo, deafness and tinnitus.

Etiology :- 1- Salt and water retention. 2- Allergy. 3- Viral infection. 4- Autoimmune. 5- Autonomic imbalance increase sympathetic activity vasospasm accumulation of metabolites, Vasodilatation excessive fluid formation

Clinical picture :- 1- Recurrent attack of the following triad.

2- Vertigo few minutes to few hours.

3- Deafness SNHL low tone fluctuant.

4- Tinnitus (Associated with nausea, vomiting and nastagmous).

53- Treatment of Meniere's disease :-

1- Complete bed rest. 2- Sedatives. 3- Anti-emetics. 4- Salt and water restriction.

5- Diuretics frusemid (Lasix 6- Vasodilator Betahistine (Betaserc).

7- Antivertigo (Dramamin). 8- Streptomycin destroy both vestibulolabyrinth.

9- Surgical.

54- Tympanometry :-

Type A :- Normal Middle ear. Type As :- Oto-sclerosis.

Type C :- Eustachian tube. Type Ad :- Ossicular disruption.

Type B :- Flat" Middle ear effusion.

55- Write the diagnosis of :-

A- Low frequency SNHL :- Meniere's disease.

B- High frequency SNHL :- Pres-bycusis.

C- Frequency of 4000hz :- Noise induce SNHL.

D- Sauccer (U-shaped) :- Congenital SNHL.

56- Causes of deafness related to each types of hearing loss :-

1- C.H.L :- Lesion in External or Middle ear.

2- S.N.H.L :- Lesion in inner ear, Cochlear nerve.

3- M.H.L :- Lesion causing C.H.L and S.N.H.L.

4- Psychogenic hearing loss (Hystrical).

57- Types of hearing loss with their interpretation in pure tone audiometery:-

1- Sensori-neural hearing loss. 2- Conductive hearing loss.

3- Mixed hearing loss.

.....

58- Types of hearing loss and their representation on audiogram :-

1- Sensori-neural hearing loss. 2- Conductive hearing loss.

3- Mixed hearing loss.

.....

59- Give account in sensory hearing loss in post kernicterus :-

.....

60- Pure tone audiometery (PTA) :-

Is the key hearing test used to identify hearing threshold levels of an individual, enabling determination of the degree, type and configuration of a hearing loss.

Thus, providing the basis for diagnosis and management.

PTA is a subjective, behavioural measurement of hearing threshold, as it relies on patient response to pure tone stimuli.

61- Function of wax :-

1- Contain lysosome enzyme acts as anti-bacterial.

2- Lubrication. 3- Troping of particles.

62- Acute Mastoditis :-

63- Reservoir signs :-

Signs of the discharge in mastoiditis, when it clean it rapid reforms.

64- MacEwen's triangle :-

Is a surgical landmark for mastoid antrum.

Sup ==> supra-mental crest, ant. ==> Posterior-superior meatal wall.

Posterior ==> Trigeminal line to post meatal wall.

65- Schwartz operation :-

Cortical mastoidectomy to clean antrum in treatment of COSM.

66- Grommets tube :-

(Also called Tempanostomy tube or Ventilation tube) are tiny tubes that can be inserted into the eardrums to treat conditions that affect the middle ear, such as Recurrent middle ear infections and glue ear.

67- T- tube :-

Permanent ventilation tube.

68- Landmarks of drum :-

1- Gray-yellowish colour.
2- Semi-transparent.
3- Anterior and posterior malleular fold(ligament).
4- Handle of malleus.
5- Movement of drum by valsalva's maneuver.
6- Cone of light(Oval shape 9x̊8m).
7- Umbo.
8- Annular.
9- Oblique position.

69- Normal appearance of ear drum :-

70- What is the second tympanic membrane? And Membrane that closes the oval window :-

71- Manifestation of normal ear drum :-

72- Pathological perforation of drum :-

73- Perforation of tympanic membrane :-

1- Change in air pressure.
2- By fluid.
3- By solid objects.
4- By direct trauma.

74- Causes of blue tympanic membrane :-

1- Hemo-tympanum. 2- High jugular bulb. 3- Carotid aneurysm.

4- Glue ear (Secretory otitis media). 5- Glomus tumor.

75- D.D of traumatic and pathologic perforation of tympanic membrane :-

76- Treatment of traumatic perforation of tympanic membrane :-

77- Causes of SNHL :-

78- Congenital causes of SNHL :-

79- CHL and SNHL differentiation :-

80- How to differentiate between upper and lower motor facial nerve paralysis :-

Upper motor facial nerve paralysis	Lower motor facial nerve paralysis

81- Segments of facial nerve :-

82- Facial nerve paralysis (Etiology and clinical types) :-

83- Causes of bad smell discharge from ear :-

1- Unsafe chronic suppurotiveotitis media (Unsafe CSOM).

2- Malignant otitis externa.

84- Common site of discontinuity in ossicles :-

The junction between ancus and malleulus.

85- Patient with anterior perforation and another with posterior one who hears better and Why :-

The anterior (explain it by hearing physiology).

86- Definition cone of light :-

87- Otosclerosis :-

88- Post auricular swelling :-

89- D.D of swelling behind the ear :-

90- Tumours of external canal :-

Note :-

- **Alport syndrome** = SNHL + Nephtitis.

- **Usher's syndrome** = SNHL + Retinitis pigmentosa.

- **Peodred's syndrome** = SNHL + Gorter.

- **Mondinits disease** = cochlea is single form.

- **Alkaline F.B** ==> Liquifactive necrosis.
- **Acidic F.B** ==> Coagulative necrosis.

- **Dehecent of facial canal** (MCC congenital anomalies of middle ear)
- **The most common site of chronic otitis media is the lateral semicircular canal** (MCQ)

Nose

1- The draw of anatomy of nose :- **(الدكتور العطاب)**

The most important is the lateral wall,

Also the ethmoidal air cell (Ager Nasi Cells, "haler cell and onodi cells").

2- Opening of paranasal sinuses :-

A- Anterior group :-

1- Frontal.

2- Maxillary.

3- Anterior ethmoid.

B- Posterior group :-

1- Posterior ethmoid.

2- Sphenoid.

3- Lateral wall of nasal cavity :-

1- The turbinates :- Three or sometimes four bony shelves covered by erectile mucosa, project from the lateral wall of the nose.

2- A series of spaces are created by the overhanging edge of these turbinates.

a- Inferior Meatus :- - Inferior to the inferior turbinate.
- Contains orifice of nasolacrimal duct.

b- Middle Meatus :- - Inferior to the middle turbinate.
- Contains semilunar hiatus, with openings of the maxillary, frontal, anterior ethmoidal sinuses.

c- Superior Meatus :- Drains posterior ethmoid cells.

d- Spheno-ethmoid recess :- Orifice of sphenoid sinus.

4- Medial wall of nasal cavity (The nasal septum) :-

The Nasal Septum :-

1- Septal Cartilage.

2- Perpendicular Plate of the ethmoid Bone.

3- The Vemor.

4- Membranous part and maxillary crest.

5- Haler cell :-

Is a pneumatizedethmoid cell that projects along the medial roof of the maxillary sinus .

6- Blood supply of little's area (also known as Kiesselbach's plexus) :-

Definition :- Is found on the anterior nasal septum and is anastomosis between Internal and external Carotid artery (CA) at the anterior inferior Part of nasal septum.

Blood Supply :- Is an anastomosis of 5 arteries :-

1- Anterior ethmoidal artery. 2- Posterior ethmoidal artery.

3- sphenopalatine artery. 4- Greater palatine artery.

5- Septal branch of the superior labial artery.

7- Functions of the nose :-

1- As Part of body's respiratory system. 2- Smell. 3- Vocal resonance.

4- Olfactory Function. 5- Phonatory Function. 6- Drainage of lacrimal fluid .

7- Protection function :-

a- Worming, Moistening, Filtration. b- Vibrissa hair. c- Cilia of mucosa.

d- Reflex sneezing. e- Lysozme enzyme act as Anti-bacterial.

8- Physiology of nose :-

9- Symptoms of nasal diseases :-

1- Nasal obstruction. 2- Discharge. 3- Deformity. 4- Epistaxis.

5- Facial pain. 6- Headache. 7- Smell disorder (Anosmia). 8- Sneezing.

9- Snoring. 10- Swelling. 11- Orbital Symptoms.

10- Definition and causes of sinusitis (Rhino-sinusitis) :-

Definition :- Is infectious or non-infectious inflammation of one or more sinuses.

- Infection lasting 4 weeks or Less.

Causes :- 1- Allergic. 2- Viral. 3- Bacterial or rarely Fungal.

11- The pathology of the sinusitis :-

……..

12- Cycle of sinusitis :-

……..

13- Definition and types of Rhino-sinusitis (Sinusitis) :-

Definition :- Inflammation of the mucosa of the sinuses (sinusitis), it is usually associated with rhinitis, So it is called Rhino-sinusitis (One or more of the sinuses may be affected).

Types :- 1- Acute Rhinosinusitis. 2- Recurrent acute Rhinosinusitis.
3- Sub-acute Rhinosinusitis. 4- Chronic Rhinosinusitis.

14- Predisposing factors of sinusitis (Rhino-sinusitis) :-

1- Cause of bacterial sinusitis is often multi-factorial.
2- Most common are viral URTI and allergies.
3- Medical conditions (cystic fibrosis, immunodeficiency).
4- Irritants (tobacco smoke, air pollution).
5- Anatomic (deviated septum, polyps).
6- Medications (topical decongestant overuse, cocaine).
7- Trauma (dental procedures, scuba diving, Fractures).
8- Foreign Body.
9- GERD.

15- Predisposing factors for rhino-sinusitis :- 1- Hereditary. 2- Hormonal. 3- Climate.
4- Psychosis and mental factors.

16- Clinical manifestation of Acute Rhinosinusitis:-

Symptoms :- 1- Itching and burning sensation. 2- Nasal stuffiness.
3- Rhinorrhoea. 4- Sneezing.
5- Nasal obstruction. 6- Ansomia or Hyposmia. 7- Headache.

Signs :- By inspection :-
1- Edematous nasal mucosa. 2- Swollen edematous turbinates.
3- Mucoid thin secretion (rhinorrhea). 4- Nasal polyp may present.
By palpation :- Tenderness over the affected sinus.

17- Complication of chronic rhino-sinusitis :-

A- Local complications	B- Orbital complications	C- Intracranial complications
1- Mucocele. 2- Osteomyelitis (Pott's puffy tumor).	1- Peri-orbital cellulitis. 2- Orbital cellulitis. 3- Orbital abscess. 4- Subperiosteal abscess. 5- Cavernous sinus thrombosis.	1- Meningitis. 2- Subperiosteal abscess. 3- Extra-dural abscess. 4- Brain abscess.

18- Ostio meatal complex :-

It is the area of drainage of the group of sinus present between lamina papyracer and meddle turbinate.

19- Clinical manifestation of Acute sinusitis :-

Symptoms :-

A- Majors :- 1- Facial pain and pressure. 2- Nasal congestion and fullness.
3- Nasal obstruction and blockage. 4- Nasal discharge and purulence.
5- Hyposmia and anosmia. 6- Purulent rhinitis. 7- Fever.

B- Minors :- 1- Headache. 2- Halitosis. 3- Fatigue.
4- Dental pain. 5- Cough. 6- Ear pain and pressure.

Physical Findings (Signs) :- 1- Purulent nasal discharge. 2- Highest positive predictive value.
4- Periorbital swelling. 3- Erythema over symptomatic area.
6- Postnasal discharge. 5- Maxillary tooth tenderness.
7- Tenderness to palpation and percussion of paranasal sinuses.
8- Erythema and swelling of nasal mucosa.

20- Complications of sinusitis :-

A- Local complications	B- Orbital complications	C- Intracranial complications
1- Mucocele. 2- Osteomyelitis (Pott's puffy tumor).	1- Periorbital cellulitis. 2- Orbital cellulitis. 3- Orbital abscess. 4- Subperiosteal abscess. 5- Cavernous sinus thrombosis.	1- Meningitis. 2- Subperiosteal abscess.

21- What is the antibiotic of choice in acute sinusitis :-

Antibiotics - First-line :- 1- Amoxicillin (500mg tid for 10 days).

2- Beta-lactam allergy :- A- Doxycycline.

B- Trimethoprim.

C- Sulfamethoxazole.

22- What is the treatment of acute sinusitis :-

Management :- 1- 70% of cases will resolve spontaneously without Antibiotics.

2- Analgesics and Anti-pyretcs for pain and fever.

3- Topical or systemic decongestants may help- but short duration use only!.

4- Topical corticosteroids controversial but may help.

5- Saline irrigation and inhalation of steam may help.

6- Antibiotic therapy for those with ABS as defined by history and P/E.

Antibiotics - First-line :- 1- Amoxicillin 500mg tid for 10 days.

2- Beta-lactam allergy :- a- Doxycycline.

b- Trimethoprim.

c- Sulfamethoxazole.

Antibiotics - Second-line :- 1- Amoxicillin-clavulanate. 2- Cefuxorimeaxetil.

3- Beta-lactam allergy :-

a- Azithromycin or b- Clarithromycin or

c- Gatifloxacin or d- Levofloxacin or

f- Moxifloxacin.

Surgical :- - If failure of medical treatment.

- Complicated sinusitis → FESS.

23- What is the treatment of acute rhinosinusitis :-

Conservative Treatment :- 1- Bed rest. 2- Avoidance of the cause (main treatment).

Medical Treatment :- 1- Vitamin C. 2- Antihistamine (as loratidine). 3- Topical Decongestant.

4- Steroids :- a- Betamethazone nasal drops or spray.

b- Short acting systemic Steroids.

c- Mast cell stabilizer as sodium chromoglycate ??

Surgical Treatment :- 1- Septoplasty. 2- Nasal polyp-ectomy.

3- Parted turbunectomy or submucosal by laser or diathermy.

24- Describe the following picture of head x ray and DD (Sinusitis) :-

25- Definition of rhinitis :-It's inflammation of the lining of the nose, characterized by one or more of the following symptoms :-

1- Nasal obstruction. 2- Rhinorrhoea.

3- Sneezing. 4- Itching.

26- Definition of allergic rhinitis and its Symptoms :-

Definition :- Hypersensitivity of mucosa of the nose and sinuses mediated by IgE to antigen material.

Symptoms :- Recurrent attacks of :- 1- Sneezing. 3- Rhinorrhea (bilateral and watery).

2- Itching. 4- Nasal obstruction (bilateral).

27- Atrophic rhinitis and smell disorders :-

Atrophic rhinitis :- Is a chronic inflammatory disease characterized by progressive atrophy of the nasal mucosa and the underlying bone of the turbinates.

Smell disorders :- 1- Anosmia :- (absence of smell). 3- Parosmia.

2- Hyposmia (decrease of smell). 4- Cacosmia.

28- Chronic specific inflammation of rhinitis :-1- Rhinoscleroma (commonest). 2- Syphilis.

3- Lupus. 4- Leprosy. 5- Fungal infection.

29- Definition and causes of vasomotor rhinitis :-

Definition :- It is Non-allergic perennial rhinitis due to disturbance of Autonomic nerve supply of the nose (Para-sympathetic part).

Causes:- Is due to parasympathetic over activity which lead to congestion and vasodilatation.

Predisposing factors :- 1- Genetic. 2- Physical. 3- Emotional.

30- Definition, cause, symptoms, complications and treatment of Common cold(Coryza)**:-**

Definition :- ……..

Predisposing factors :- 1- Low resistance of the patient particularly in children.
2- Exposure to cold, chills and temperature change.
3- Over-crowdness.

Clinical picture :- 1- Stage of ischemia (vasoconstriction). 2- Stage of hyperaemia.
3- Stage of secondary Bacterial infection. 4- Stage of resolution.

Complications :- 1- Sinusitis. 2- Phoryngitis. 3- Otitis media.
4- Laryngitis. 5- Pneumonia. 6- Permanent Anosmia.
7- Laryngeo-tracheo-bronchitis.

Treatment :-

A- Prophylactic :- 1- Avoid contact with patient. 2- Vaccination.
3- Surgical correction of nasal septum.

B- General :- 1- Bed rest and blenty of fluids. 2- Analgesic and antipyretics.
3- Systemic antibiotics. 4- Vitamin C. 5- Anti-histaminics.

C- Local :- 1- Decongestant nasal drops. 2- Steam inhalation.

31- How to diagnosis, treatment and complication of Rhino-scleroma :-

Investigation	**Treatment**	**Complications**
1- Biopsy :- 2- Culture. 3- Electro-microscope exam	Medical :- 1- Rifampicin 2- Streptomycin 3- Alkaline meal douch. Surgical :- 1- Removal of the mass. 2- Laser	1- Extension :- - Subacute (ulceration). - Pharynx (Pharyngo-scleroma) - Larynx (Laryngo-scleroma) 2- Fibrosis. 3- Malignant transformation if treated by radiotherapy.

31- Types, Clinical features, Complication and management of Foreign body in the nose :-

Types :- 1- Animate (vegetable). 2- Inanimate (non-vegetable).

Clinical features :- 1- Sneezing and pain. 2- Unilateral offensive Mucopurulent Discharge.
3- Unilateral nasal obstruction. 4- Anterior rhinoscopy.
5- Hard F.B may be felt by probing. 6- Sometimes fiber-optic endoscopy.

Complications :- 1- Infection. 2- Pulmonary complications. 3- Rhinolith.

Treatment :- The F.B removed carefully by :- 1- Hook. Or 2- Forceps.
3- Suction.

32- Definition, causes, Clinical picture, complications and Treatment of the Septal abscess :-

Definition :- Collection of pus between muco-perichondrium and cartilage of the septum.

Causes :- 1- Infected hematoma. 2- Infected Surgical wound. 3- Furuncle.

Clinical picture :-

Symptoms :-

A- General symptoms :-	B- Local symptoms :-
1- Fever.	1- Pain.
2- Headache.	2- Bilateral nasal obstruction.
3- Malaise.	

Signs :- 1- Anterior rhinoscopy :- Bilateral fluctuant tender swelling on both sides of the septum.
2- Syringe aspiration :- pus.

Complications :- 1- Cavernous sinus thrombosis.
2- Necrosis of septal cartilage.

Treatment :- 1- Systemic Antibiotics. 2- Incision and evacuation.
3- Anterior nasal pack to prevent recollection.

33- Causes, clinical picture and Treatment of Septal perforation :-

Causes :- 1- Traumatic (Most common cause).

2- Inflammatory :- A- Acute :- (septal abscess).

B- Chronic (Lupus→ cartilaginous).

3- Neoplastic :- Malignant tumor.

4- Toxic.

Clinical picture :- (It may be asymptomatic if small).

1- Epistaxis and crusty Discharge.

2- Whistling sound during respiration. 3- Saddle nose.

Treatment :-

A- Medical :- 1- Repeated alkaline nasal douche to dissolve the crusts.

2- Closure of the perforation by obturator (button like).

B- Surgical :- Closure of the perforation by graft or mucosal flap from the surrounding area.

34- Definition, causes Complication and treatment of nasal septal hematoma :-

Definition :- Collection of blood between peri-chondrium and cartilage of septum.

Causes :- 1- Traumatic (usually). 2- Surgical. 3- Fracture nose.

Complications :- Nasal (septal) abscess.

Treatment :- 1- Systemic Antibiotics to prevent secondary infection.

2- Incision and

35- What is the nasal cycle and Describe the nasal cycle :-

Definition :- Is the periodic alternation in nasal airflow resistance between the two nasal cavities.

- Regulated by the Autonomic nervous system.

- This cycle varies from person to person but Normally takes Three to Four hours.

36- Type and treatment of septal deviation :-

Types :- 1- Simple deviation (C-shaped and S-shaped).

2- Deviation with Spur. 3- Deviation with dislocation.

Treatment :- 1- Sub-mucosa resection after age 18.

2- Septoplasty at any age.

37- Complication of nasal septum deviation :-

1- Recurrent sinusitis. 2- Recurrent otitis media.

3- Recurrent pharyngitis. 4- Secondary atrophic or hyper-trophic rhinitis.

38- Definition and causes of the Nasal Polyps :-

Definition :- Pedunculated edematous mucosa prolapsed through Middle Meatus to the nasal cavity.

[Either from :- - Ethmoid→ethmoidal = Allergic Polyps.

- Maxillary antrum = Antro-choanal polyp].

Causes :- 1- Allergic Rhinitis :- Associated with other allergic manifestation.

2- Inflammatory :- Ethmoidal sinusitis.

3- Allergic Fungal sinusitis.

39- Types of the Nasal polyp and their treatment :-

	1- Allergic (ethmoidal) Polyps	**2- Antro-choanal polyp**
Definition	Pedunculatedoedematous mucosa of the Ethmoid prolapsed through the Middle Meatus to the nasal cavity.	Pedunculatedoedematous mucosa of maxillary antrum prolapsed through middle Meatus to the nasal cavity then posteriorly to the naso-pharynx passing from the choana.
Note	It is bilateral and Multiple (with Allergic criteria).	Unilateral and Single (without Allergic criteria).
Treatment	A- Medical :- 1- Anti-allergic treatment (Steroids and anti-histaminic). 2- Antibiotics for infection. B- Surgical :- 1- Nasal polyp-ectomy. 2- Ethmoid-ectomy.	1- Endoscopic sinus surgery (ESS) and removal of Polyp is the standard treatment. 2- Radical antrum operation (used in recurrent cases).

40- Definition and types of the Granuloma of nose :-

Definition :- Is Chronic specific inflammation with formation of macrophages.

Types :- 1- Rhino-scleroma (The commonest). 2- Syphilis. 3- Lupus.

4- Leprosy. 5- Fungal infection.

41- Causes of unilateral nasal obstruction :-

1- Congenital (choanal atresia).

2- Traumatic (Fracture or Foreign body in nose).

3- Inflammatory (Diphtheria and Acute rhinitis/ sinusitis).

4- Neoplastic (Small angio-fibroma or carcinoma).

5- Deviated septum

6- Miscellaneous :-

1- Deviated nasal septum (DNS). 2- Hypertrophic inferior turbinate.

3- Antro-choanal polyp. 4- Foreign body. 5- Rhinolith.

42- Nasopharyngeal carcinoma and its Treatment :-

It's Mis-diagnose due to "Rosen-muller fossa" is silent area and can't be seen by endoscopy.

Most common site :- Rosen-muller fossa.

- It's Sub-mucosal. - It's ulcerative (not fungating).

Presentation :-

A- First common Presentation	**B- Second common Presentation**	**C- Third common presentation**
Swelling in the neck (Not painful and Not multiple).	1- Ear ache. 2- Deafness. 3- Facial pain. 4- Secondary otitis media.	Paralysis of soft palate of same side.

Treatment :- Radio-therapy is the only treatment.

43- Silent area of nose :-

Definition :- Is area that may lead to L.Ns metastasis before giving Symptoms related to affected area.

Site :- 1- Fossa of rosen-muller (Naso-pharynx). 2- Pyriform fossa (Hypo-pharynx).
3- Floor of mouth. 4- Supra-glottic area of larynx.
5- Tonsil. 6- Tongue base. 7- Thyroid.

44- What are the silent area in the head and neck :-

1- Nasopharynx (Rosenmuller fossa). 2- Base of tongue and valecula.
3- Tonsillar crypts. 4- Thyroid gland.
5- Supraglottic larynx (ventricles and epiglottis). 6- Pyriform fossa.
7- Floor of mouth. 8- Maxillary sinus(very rare).

45- Most common cause and the most common site of epistaxis :-

Most common causes :-

A- Local causes	**B- General causes**
1- Idiopathic (Commonest) :- From little's area. 2- Traumatic :- (Foreign body or Fracture of nose or Surgical). 3- Inflammatory :- (Acute specific, non-specific rhinitis or Acute and chronic sinusitis). 4- Neoplastic :- A- Nasal Tumor :- 1- Hemangioma (benign). 2- Carcinoma (malignant). B- Nasophrayngeal Tumor :- 1- Angiofibroma (benign). 2- Carcinoma (malignant).	1- C.V.S causes :- a- Hypertension (HTN). b- Supra-medastinal mass. 2- Hematological causes :- a- Thrombocytopenic purpura. b- Leukemia. c- Haemophilia. d- Hodgkin's lymphoma. 3- Hepatic causes :- a- Liver cirrhosis. b- Liver Failure. 4- Other causes :- a- Fever → Rheumatic fever (RF). b- Lupus erythematosus cell (LEC) → Vasculitis. 5- Drugs :- a- Aspirin. b- Heparin.

Most common site :-

A- From Little area (source is commonest site) :-

1- Anterior Ethmoidal artery [Ophthalmic artery].

2- Sphenopalatine artery [Maxillary artery].

3- Greater Palatine artery [Maxillary artery].

4- Superior labial artery [Facial artery].

B- Bleeding from above the middle turbinate.

46- Management of epistaxis :-

A- Initial Management	B- Non-surgical Treatment	C- Surgical Treatment
1- ABC's. 2- Medical history/ Medications. 3- Vital signs- need IV? 4- Physical exam :- a- Anterior rhinoscopy. b- Endoscopic rhinoscopy. 5- Laboratory exam. 6- Radiologic studies.	1- Control of hypertension. 2- Correction of coagulo-pathies/ thrombocytopenia :- - FFP or whole blood/reversal of anticoagulant/ platelets. 3- Pressure/Expulsion of clots. 4- Topical decongestants/vasocontrictors. 5- Cautery (AgNo3 vs. TCA vs. Bipolar vs.Bovie). 6- Nasal packing (effective 80-90% of time). 7- Greater palatine foramen block. 8- Humidity/emolients. 9- Discontinue offending meds. 10- Nasal saline sprays. 11- Avoidance of nose picking/blowing. 12- Sneeze with mouth open. 13- Avoid straining/bed rest.	1- Transmaxillary IMA ligation. 2- Intraoral IMA ligation. 3- Anterior/Posterior Ethmoidal ligation. 4- Trans-nasal endoscopic Spheno-palatine ligation. 5- External carotid artery ligation. 6-Septodermoplasty/ Laser ablation.

47- Complications of nasal Trauma :-

1- ..... 2- ..... 3- .....

48- Complication of nasal bone fracture :-

1- Septal hematoma. 2- Septal abscess.

3- Caverneous sinus thrombosis. 4- Saddle nose.

49- Treatment of nasal bone fracture :-

A- If the patient is seen shortly after Trauma :-

1- If there is No marked edema :-

- Manual reduction.

- If the patient is Not cooperative or for the fear of Shock put the patient under anesthesia (general or local) the reduction done by :-

1- Walsham's forceps :- For nasal bone fracture.

2- Asch forceps :- For the septum.

2- If there is marked edema :-

- Give Antibiotics and analgesic.

- Don't forget to stop the bleeding then wait for edema to subside tell.

- The patient to come back in Less than 2 weeks ==> reduction.

B- If the patient is seen Late (after more than 2 weeks) :-

1- Adult :- Ask the patient to come back after 3 months and perform surgery.

2- Child :- Wait until they are 17 years old then perform the surgery.

50- Indication and complications of septoplasty:-

Indication	**Complications**
1- Sympto-matizing Deviated septum at any age. 2- Septal dislocation.	1- Anesthetic complications. 2- Post-operative hemorrhage, hematoma and infection (septal abscess and sinusitis). 3- Adhesion between septum and turbinate (It is commonest complication). 4- Perforation of the septum (Less common complication). 5- CSF rhin-orrhoea (Trauma to cribriform plate).

51- Indication and complication of sub-mucosal resection (S.M.R) :-

Indications	**Complications**
1- Nasal obstruction. 2- Recurrent upper respiratory infection. 3- Recurrent sinusitis. 4- Recurrent epistaxis.	1- Hemorrhage. 2- Septal perforation. 3- Flapping septum. 4- Adhesion between septum and Lateral wall.

52- Signs of Maxillary sinus :-

53- Definition, causes, and differential diagnosis of stridor :-

Definition :- Noisey breathing, originated in the larynx or trachea due to partial obstruction of the larynx or trachea.

Causes :-

1- Congenital (common in child). 2- Chronic specific (granuloma).

3- Traumatic. 4- Acute specific (diphtheria).

5- Acute non-specific :- (a- Acute laryngitis in children. b- Acute epiglotitis).

6- Neoplastic :- (a- Multiple papillomatosis. b- Cancer of larynx).

7- Bilateral vocal cord paralysis. 8- Laryngeal edema.

Differential diagnosis :- 1- ..... 2- .....

3- ..... 4- .....

54- Causes of stridor :-

1- Congenital as web. 2- Traumatic as F.B inhaled and corrosive laryngitis.

3- Inflammation all acute and Chronic. 4- Bilateral Vocal cord paralysis.

5- Neoplastic all Malignant and benign as juvenile Multiple papillomatosis.

6- Laryngeal spasm or laryngeal edema.

55- Causes of stridor in children :-

1- Congenital :- [1- Laryngeomalacia 2- Laryngeal web 3- V.C paralysis 4- Laryngeal cyst].

2- Traumatic :- as F.B inhaled and corrosive laryngitis.

3- Inflammatory :- All acute [- Specific (diphtheria laryngitis)

- Non-specific (acute laryngio-tracheo-bronchitis or herpes of larynx)]

4- Neoplastic :- Juvenile Multiple papillomatosis.

5- Laryngeal spasm or laryngeal edema.

56- Causes of stridor without hoarseness of voice (change of voice) :-

Any causes lead to bilateral cord paralysis lead to stridor without hoarseness.

A- Intracranial causes :- 1- Traumatic. 2- Inflammatory.
3- Neoplastic. 4- Vascular degenerative.

B- Cranial causes :- 1- Traumatic. 2- Inflammatory.
3- Neoplastic. 4- Idiopathic.

C- Extra-cranial :- In neck as thyroid operation esophageal cancer, trauma.

57- Causes of hoarseness without stridor :- Unilateral paralysis of vocal cord.

58- Causes of hoarseness of voice :-

1- Congenital :- as web. 2- Traumatic :- as Foreign body inhaled.

3- Inflammatory :- as acute or Chronic. 4- Neoplastic :- as benign or Malignant.

5- Miscellaneous :- as a- Unilateral vocal cord paralysis.
b- Hystrical. c- Laryngeal edema.

59- Spheno-ethmoidal recess :-

60- Mucolytic nasal drops ==> rhinitis medicamentosa :-

61- Complication of nasal obstruction :-

62- Acute rhinosinusitis symptoms and signs :-

Throat

1- Write short account on peri-tonsillar abscess (quinsy) :-

An abscess in the peritonsillar space between the fibrous capsule of the tonsil usually at it's upper pole and it's muscular bed.

- It occurs usually as a complication of acute tonsillitis.
- Is a recognized complication of tonsillitis and consists of a collection of pus beside the tonsil in what is referred to as peritonsillar space (peri-meaning surrounding).
- It is a commonly encounteredotorhinolaryngological (ENT) emergency.

2- D.D of membranous disease over the tonsils :-

1- Membranous tonsillitis. 2- Diphtheria. 3- Vincent angina.

4- Infectious mononucleosis. 5- Agranulocytosis. 6- Leukaemia.

7- Aphthous ulcers. 8- Malignancy tonsil. 9- Traumatic ulcer.

10- Candidal infection of tonsil.

3- Signs of chronic tonsillitis :-

1- Congested anterior pillars. 2- Asymmetrical enlargement.

3- Irregular shape. 4- Kissing tonsils (chronic parenchymatous type).

5- Yellowish beads of pus on medial surface of tonsil (Chronic follicular type).

6- Flushing of anterior pillars compared to the rest of pharyngeal mucosa.

7- Enlargement of jugulodigastric lymph nodes

4- Differential diagnosis of white patches in tonsil :-

5- Indication of tonsillectomy :-

1- Recurrent acute attack (>3 times/years). 2- One attack of Quinsy.

3- Chronic tonsillitis dysphagia due to hypertrophy.

4- Diphtheria carries resistance to treatment. 5- Foreign body (F.B) in the tonsil.

6- Tumor of tonsil (papilloma and carcinoma).

6- Extra esophageal manifestation of GERD :-

1- Hoarseness. 2- Chronic laryngitis and sore throat. 3- Globus sensation.

4- Asthma. 5- Chronic cough. 6- Halitosis. 7- Otitis media.

8- Dental Erosion. 9- Non cardiac chest pain. 10- Aspiration pneumonia.

7- What are the causes of Progressive dysphagia :-

1- Plummer–Vinson Syndrome. 2- Post-cricoid carcinoma.

3- Carcinoma of the oesophagus.

8- What is plummervinson syndrome :-

Definition :- It is chronic inflammation of mucosa of the hypopharynx and upper part of the oesophagus occurs in middle aged female.

Is a rare disease characterized by :-

1- Difficulty in swallowing. 2- Iron deficiency anemia.

3- Glossitis. 4- Cheilosis. 5- Esophageal webs.

Treatment with :-

1- Iron supplementation.

2- Mechanical widening of the esophagus generally provides an excellent outcome.

9- Indication and contraindication of Oesophagoscopy:-

Indications	**Contraindication**
A- Diagnostic :- 1- To examine the esophagus in case of dysphagia. 2- To take a biopsy. B- Therapeutic :- 1- To remove a F.B. 2- To remove benign tumor by a forceps or by Lazer. 3- To dilate structures of the esophagus.	1- Aortic aneurysm. 2- Acute ulceration after corrsives. 3- Severe kyphosis.

10- Herpes zoster :-

Is a viral disease characterized by a painful skin rash with blisters involving a limited area.

Typically the rash occurs on either the left or right of the body or face in a single stripe.

Two to four days before the rash occurs there may be pain or tinglingin the area.

Otherwise there are typically few symptoms.

11- Describe adenoid facie :-

Is the unusual growth ("hypertrophy") of the adenoid tonsil first described by the Danish physician Wilhelm Meyer (1824-1895) in Copenhagen in 1868.

He described that a long term adenoid hypertrophy will cause an obstruction of the nasal airways.

These will lead to a dento-facial growth anomaly that was defined as "adenoid facies".

12-Symptoms of adenoid hypertrophy :-

Nasal symptoms	Aural symptoms	General symptoms
1- Nasal obstruction. 2- Nasal discharge (a wet bubbly nose). 3- Sinusitis. 4- Epistaxis. 5- Voice change (Rhinolaliaclausa).	1- Tubal obstruction. 2- Recurrent attacks of acute otitis media. 3- Chronic suppurative otitis media. (May fail to resolve in the presence of infected adenoids). 4- Serous otitis media.	1- Adenoid facies :- a- Elongated face with dull expression. b- Open mouth, prominent and crowded upper teeth and hitched up upper lip. c- Nose gives a pinched-in appearance due to disuse atrophy of alaenasi. d- Hard palate in these cases is highly arched as the moulding action of the tongue on palate is lost. 2- Excessive loud snoring at night. 3- Obstructive sleep apnea. 4- Pulmonary Hypertension. 5- Aprosexia (i.e. Lack of concentration).

13- X-ray lateral view of skull showing adenoid hypertrophy :-

X- ray soft tissue nasopharynx lateral view :-

Reveal size of adenoids, and extent of nasopharyngeal air space compromise.

14- Indication and contraindication of adenoidectomy :-

Indications	Contraindication
1- Adenoid hypertrophy. 2- Obstructive sleep apnea. 3- Obligatory mouth breathing. 4- Chronic mucopurulent nasal discharge and Recurrent rhinosinusitis. 5- Chronic otitis media with effusion associated with adenoid hyperplasia (Myringotomy). 6- Dental malocclusion (Adenoidectomy does not correct dental abnormalities but will prevent its recurrence after orthodontic treatment).	1- Cleft palate or submucous palate. (Removal of adenoids causes velopharyngeal insufficiency in such cases). 2- Haemorrhagic diathesis. 3- Acute infection of upper respiratory tract.

15- Definition and causes of Laryngitis :-

Definition :- Is an inflammation of the larynx.

It causes hoarse voice or temporary loss of the voice due to irritation of the vocal folds (vocal cords).

Laryngitis is one possible cause of dysphonia, the medical term for a vocal disorder.

Causes :-

A- Non-infectious :- 1- Acid reflux disease. 2- Allergies.

3- Inflammation due to overuse of the vocal cords.

4- Excessive or chronic coughing, smoking, or alcohol consumption.

B- Infectious :- 1- Viral laryngitis can be caused by rhinovirus, influenza virus, Para-influenza virus.

2- Fungal laryngitis can be caused by Histoplasma, Blastomyces, Candida.

16- Classification of Laryngitis :-

A- Acute Laryngitis	**B- Chronic laryngitis**
A- Acute specific :- Specific diphtheria	A- Chronic specific :- 1- Specific granuloma. 2- Scleroma. 3- Syphilis 4- TB. 5- Leprosy. 6- Fungal infection.
B- Acute non-specific :- 1- Laryngitis. 2- Epiglottits. 3- Laryngotracheobronchitis.	B- Chronic non-specific :- - Atrophic Hypertrophic. - Diffuse Localized :- a- Node. b- Polyp. c- Leukoplakia.

17- Type of acute specific laryngitis :-

(Only one type) Specific laryngeal Diphtheria.

18- Types of acute non-specific laryngitis :-

1- Laryngitis. 2- Epiglotitis. 3- Laryngo-tracheo-bronchial.

19- Reinke's edema :-

edema of subepith. space of the vocal cord.

20- Treatment of laryngeal edema :- **بالترتيب**

1- Corticosteroid. 2- Intubation. 3- Laryngectomy.

A- Medical :- 1- Oxygen inhalation.

2- Hydrocortisone IV act as antiodematous.

B- Surgical :- Trachoestomy or Endotracheal intubation in sever stridor.

21-Treatment of laryngeal Trauma :-

A- Emergency treatment :- 1- Bleeding Control.

2- Resuscitation airway care (intubation, tracheostomy).

3- Antibiotic. 4- Analgesic. 5- Corticosteroid.

6- Surgical repair of laryngeal cartilage fractures.

B- Late treatment :- 1- Treatment of complications.

2- Plastic surgery to correct adhesion and stenosis.

22-Complications of laryngeal Trauma :-

Early complication	**Late complication**
1- Bleeding. 2- Airway obstruction due to (blood clot, F.B, cartilage pieces, oedema).	1- Lost of function. 2- Stenosis. 3- Adhesions. 4- Fistula.

23- How to examine and investigated patient with laryngeal disease :-

24- If present case with larynx disease where done evaluation it :-

25- Local examination of larynx :-

26- Mention 4 congenital anomalies of larynx :-

1- Congenital web :- (Fibrous band between both V.C).

2- Laryngo-malacia :- (Congenital laryngeal stridor).

3- Congenital subglottic stenosis.

4- Subglottic haemangioma.

27- Give account on differences between laryngiomalacia and congenital laryngeal web :-

	A- Laryngiomalacia	**B- Congenital laryngeal web**
Definition	It is softening of the epiglottis of the supraglottic area cartilage with redundant mucosa.	Persistence of a fibrous membrane between the anterior half of the true vocal cord due to failure complete canalization of the larynx during embryogenesis.
Clinical Presentation	1- Inpiratory stridor. 2- Dyspnea. 3- NO hoarsness of voice. 4- Stridor improves on change the position of child. 5- Difficulty feeding :- No growth of an infant.	Vary with the size of the web. - Appears after birth. - Hoarseness of voice (main symptom) (high pitch tone). - Inspiratory stridor in severe cases.
Diagnosis	A- History. B- Clinical Examination (Flexible, fiberoptic laryngoscope).	A- History. B- Examination (Flexible, fiber-optic laryngoscope).
Treatment	1- Reassurance (in the majority of cases, change position). 2- Aryepiglottoplasty (supra-glotto-plasty) under General Anesthesia and microlarygoscopy. 3- By laser or laryngeal instruments. 4- Tracheotomy in severecases.	- NO treatment in milder cases. - Excision by micro-larygoscopy, or by a laser. - External technique with silastic keel insertion (laryngofissure). - Tracheotomy (in severe cases).

28- Difference between laryngeal polyp and papilloma :-

	Laryngeal polyp	**Papilloma**

29- Risk factors of laryngeal cancer :-

1- Sex :- male >female (5:1).
2- Age (Sixth decade).
3- Smoking (most important risk factor).
4- Heavy chronic consumption of alcohol.
5- Radiation to the neck.
6- Leukoplakia, Keratosis.
7- Chronic atrophic laryngitis, GERD, H.P.

30- What are the barriers that prevent spreading of laryngeal carcinoma :-

1- Sub-mucosal membrane (Quadrangular, conuselasticus).
2- Peri-condrium
3- Framwork of larynx.

31- What are the causes of fixed of the vocal cord in the carcinoma of the larynx :-

1- Deep invasion of cancer.
2- Destruction of recurrent laryngeal nerve.
3- Fixation of laryngeal joint.

32- Clinical presentation (Picture) of cancer larynx :-

Symptoms (General)	**Signs**
1- Hoarseness or other voice changes. 2- Difficulty of breathing. 3- Stridor. 4- Dysphagia. 5- Cachexia. 6- Hemoptysis. 7- Ear pain. 8- Cervical L.N. 9- Neck fistula.	1- Neck deformity. 2- Intra-laryngeal mass. 3- Fixed vocal cord. 4- Ulceration. 5- Persistent cough. 6- Bad breath. 7- Ear-ache ("referred"). 8- Difficulty swallowing.

33- Differential diagnosis of cancer larynx :-

1- Laryngeal granuloma.
2- Benign Neoplasma.

34- Classification of laryngeal Tumors :-

35- Protocol of laryngeal tumor Classification :-

TNM Classification and staging :-

T (indicates tumor and its extent).

N (indicates regional lymph node enlargement and its site).

M (indicates distant metastasis).

M0 (Absence metastasis).

M1 (presence metastasis).

Staging of disease helps to compare the results of treatment and assists in the choice of treatment and prognosis of disease.

TNM Classification and staging	
Glottic cancer (T1, T2, T3, T4)	T (Is carcinoma in situ). T1 (One or two vocal cord involved with normal mobility of vocal cord). T1a (Tumor limited to one vocal cord). T1b (Tumor involves both vocal cord). T2 (Tumor extends to supra or subglottic with normal or impaired mobility vocal cord). T3 (Tumor limited to larynx with vocal cord fixation). T4 (Tumor extends to extra larynx. Beyond larynx).
Supraglottic cancer (T1, T2, T3, T4)	T (Is ,in situ). T1 (Tumor Limited to one sub-site of Supraglottic with normal mobility of vocal cord). T2 (Tumor invades more than one subsite of supraglottic with normal or impaired mobility of vocal cord). T3 (Tumor limited to larynx with vocal cord fixation). T4 (Tumor invades the thyroid cartilage and extra-laryngeal structures).
Subglottic cancer (T1, T2, T3, T4)	T (is. in situ). T1 (Tumor Limited to subglottic area). T2 (Tumor extends to vocal cord with normal or impaired mobility). T3 (Tumor limited to larynx with vocal cord fixation). T4 (Tumor invades crycoid or Thyroid cartilage or tissues beyond the larynx.
Regional lymph nodes (N)	N0 (No regional lymph node Palpable). N1 (Metastasis a single ipsilateral l n 3cm or less in dimension). N2 (Metastasis to a single ipsilateral l n more than 3 cm but none more than 6 cm in dimension, bilateral Or contralateral L.N. none more than 6 cm in dimension). N3 (Multiple ipsilateral, bilateral, contralateral l n more than 6 cm in dimension).

36- Protocol of cancer larynx Treatment :-

Specific treatment depends on the location, type, and stage of the tumor.

Treatment may involves :- A- Non Surgical :- 1- Palliative. 2- Pain killer.

3- Nutrition. 4- Airway care.

B- Surgical :- 1- Tracheostomy partial. 2- Total laryngectomy.

C- Radiotherapy or chemotherapy (alone or in combination).

This is a specialized area which requires the coordinated expertise of Ear, Nose and Throat (ENT) surgeons (Otorhino-laryngologists) and Oncologists.

A severely affected patient may require a laryngectomy, the complete or partial removal of the vocal cords.

37- Investigation of larynx :-

1- Indirect laryngoscope. 2- Direct laryngoscope. 3- Flexible laryngoscope.

4- Rigid laryngoscope. 5- Microlaryngoscopy. 6- Stroposcopy.

38- Indication of Direct vs indirect laryngoscope :-

Directlaryngoscope	Indirect laryngoscope

39- Contraindication of direct laryngoscopy :-

40- Laryngectomy indications and making decision :-

Indications :- 1- T3 and T4 glottic and supraglottic carcinoma.

2- All subglottic and transglottic carcinoma.

3- Recurrence after partial laryngectomy.

4- Recurrence after radiotherapy.

41- Vocal cords all of it is important :-

42- Definition and contents of Waldeyer's ring of pharynx with it's function :-

Definition :- It is ring of lymphoid tissues present in the sub-epithelial connective tissue in upper part of aero-digestive tract.

Contents :- 1- Nasopharyngeal lymphoid tissue or Adenoid.
2- Tubal tonsil (Fossa of Rosenmuller) (Around the Eustachian tube).
3- Palatine tonsils (In oropharynx).
4- Lingual tonsils (At the base of tongue).
5- Lymphoid follicles (Nodules) in posterior Pharyngeal wall.
6- Lateral pharyngeal band.

Functions :- It's drained in retro-pharyngeal L.N → Then to upper Deep cervical L.N.

43- Killian's dehiscence :-

A potentially weakened area in the posterior wall of the pharynx which lies between upper oblique fibers (thyro-pharyngeus) and lower transverse (crico-pharyngeus) fibers of the inferior constrictor muscle.

Or

Space between transverse crico-pharyngeal and oblique thyro-pharyngeal (area deficient of muscle coat).

44- Definition, causes, symptoms and complications of Pharyngitis :-

Definition :- Is inflammation of the back of the throat, known as the pharynx.

Causes :- A- Most cases are caused by :- Viral infection.
(Strep throat is the cause in about 25% of children and 10% of adults).
B- Uncommon causes :- 1- Bacteria such as gonorrhea. 2- Fungus.
3- Irritants such as :- a- Smoke. b- Allergies.
c- Gastro-esophageal reflux disease

Symptoms :- (Symptoms usually last three to five days).
1- Sore throat. 2- Fever. 3- Runny nose.
4- Cough. 5- Headache. 6- Hoarse voice.

Complications :- 1- Sinusitis. 2- Acute otitis media.

45- Suppuration of spaces of pharynx :-

Four Pharyngeal space for abscess collection :-

	Space
1- Peri-tonsillar abscess	Between upper pole of tonsil and sup-constrictor muscle.
2- Para-pharyngeal abscess	From base of skull into sup-mediastinum.
3- Retro-pharyngeal abscess	Retro-pharyngeal space. (situated behind the pharynx and extending from the base of skull to the bifurcation of trachea).
4- Ludwig's angina	- In Sub-mandibular area. - In Floor of mouth.

46- Trendelenburg's position :-

When the head is low down during incision of nasopharyngeal abscess.

47- Types of acute specific pharyngitis :-

	1- Diphtheria	**2- Vincent's angina**	**3- Moniliasis**
Causative organism	Coryno-bacterium Diphtheria.	Borrelia and Fusiform bacilli.	Candidiaalbicans (Fungus).

48- Clinical manifestation of acute pharyngitis :-

Milder infections	**Moderate and severe infections**	**Very severe cases**
1- Discomfort in the throat. 2- Law grade fever. 3- Congested pharynx.	1- Pain in the throat. 2- Dysphagia. 3- Headache. 4- High fever.	1- Edema of the soft palate and uvula. 2- Enlargement of the cervical lymph node.

Burning of the throat above soft palate is usually the first symptoms.

49- Mentions membranes inflammation of pharynx :-

1- Diphtheria. 2- Acute follicular tonsillitis. 3- Vincent's angina.

4- Moniliasis. 5- Blood diseases :- a- Infectious mononucleosis.

b- Agranulo-cytosis. c- Leukemia.

50- Treatment of Diphtheria pharyngitis :-

1- Hospitalization and isolation. 2- Anti-toxic serum.

3- Antibiotic drugs (Penicillin or erythromycin).

4- Treatment of complications :-

1- Laryngeal paralysis →Tracheo-stomy.

2- Palatal, Pharyngeal and esophageal paralysis →Naso-gastro-tomy (N.G.T).

3- Respiratory paralysis →Artifacial paralysis.

51- Definition and treatment of Ludwig's angina :-

Definition :- A severe form of cellulitis in the submandibular region causing an external swelling below the mandible and an internal swelling in the floor of the mouth.

- Bacterial isolates are often mixed (aerobes and anaerobes).
- Precipitated by dental procedures in 80% of cases.
- Become potentially life-threatening if the inflammatory process spreads to the deep cervical soft tissues and mediastinum.

Treatment :-

A- Medical :- 1- I.V Antibiotics. 2- Analgesic and antipyretics.

B- Surgical :- 1- Secure airway :- (Tracheo-stomy).

2- Incision and drainage for decompression.

52- Clinical picture of Ludwig's angina :-

History of tooth extraction or dental infection.

Symptoms	**Signs**
1- Fever. 2- Headache. 3- Malaise. 4- Severe pain over the floor of the mouth with dysphagia and drooling of saliva.	1- Hard tender neck swelling (involving sub-mental and sub-mandibular regions, first indurated the become fluctuating. 2- The overlying skin is red, hot, and edematous. 3- Swollen edematous floor of mouth with the tongue pushed upwards and backwards. 4- Respiratory obstruction and stridor due to laryngeal edema or upwards Displacement of the tongue.

53- In Ludwig's angina the most important thing is :-

Tracheostomy

54- Difference between tonsillitis and pharyngitis :-

Tonsillitis	**Pharyngitis**

55- How to differentiated between acute tonsillitis or acute pharyngitis :-

Acute tonsillitis	**Acute pharyngitis**
- Hyperemia in posterior wall of tonsil only (Localized).	Hyperemia and congestion of the all pharynx (Diffuse).

56- Difference between acute follicular tonsillitis and diphtheria :-

	Acute follicular tonsillitis	**Diphtheria**
Past history	Recurrent sore throat with fever.	Contact with Diphtheria patient.
Diphtheria vaccination	Taken.	Not taken.
Age	No age bar.	Children.
Onset	Acute.	Insidious.
Throat pain	Severe.	Mild.
Fever	High grade.	Low grade.
Hoarseness of voice and respiratory distress	Never.	Present in advanced disease.
Neck bull due to cervical lymphadenopathy	Absent.	Not uncommon.
Pulse rate	In proportion to fever.	Out of proportion to fever and weak.
Toxemia	Absent.	Present in advanced disease.
Tonsillar membrane	Limited to tonsil and Easily removed.	- May extend adjacent structure. - Difficult to remove. - Leaves raw bleeding area.
Throat swab	Streptococci.	Coryne-bacterium Diphtheria.
Urine	No albumin.	Albumin often present.
First line of Treatment	Antibiotics.	Anti-Diphtheric serum.
Mortality	Nil.	High.

57- Causes and Treatment of Diphtheria :-

Aetiology :- - It is an acute specific infection caused by the Gram-positive bacillus, Coryne-bacterium diphtheria.

- It spreads by droplet infection.
- Incubation period is 2–6 days.
- Some persons are “carriers” of this disease (i.e. they harbour organisms in their throat but have no symptoms).

Treatment :- 1- Hospitalization and isolation. 2- Diphtheria antitoxins.

3- Antidiphtheric serum (ADS) is started immediately on clinical suspicion to neutralize the free diphtheria exotoxin.

- Dose depends on the site, duration and severity of disease.

4- Antibiotics :- a- Benzyl penicillin (600 mg 6 hourly for 7 days).

b- Erythromycin (500 mg 6 hourly orally in penicillin sensitive individuals).

58- Discuss the management of laryngeal diphtheria :-

1- Hospitalization and isolation.

2- Diphtheria anti-toxins :-

Anti-diphtheric serum (ADS) :- - Is started immediately on clinical suspicion to neutralize the free diphtheria exo-toxin.

- Dose depends on the site, duration, severity of diseases.

3- Antibiotics :- A- Benzyl penicillin 600 mg 6 hourly for 7 days.

B- Erythromycin 500 mg 6 hourly orally in penicillin sensitive individuals.

59- Trotters triad :- (This triad indication for nasopharyngeal carcinoma).

1- Unilateral facial pain(Trigeminal nerve).

2- Unilateral soft plate paralysis(Immobility).

3- Unilateral conductive hearing loss.

60- Becks triad :-(Para-pharyngeal abscess). Formed of :-

1- Internal swelling pushing the tonsil medially.

2- External tender swelling on the lateral side of the upper part of neck.

3- Trismus (Inability to open the jaw).

61- Subside for Supraglottic region :-

1- Vestibule (Upper part, above false vocal cord).

2- Ventricle (lower part between false and true vocal cord).

62- Causes of Subglottic Stenosis :-

Congenital or acquired narrowing of the subglottic airway **:-**

A- Congenital causes :- 1- Failure of reconalization of subglottic area.

B- Acquired causes :- 1- Intubation. 2- Bronchoscopy. 3- Tracheotomy.

4- Neck Trauma. 5- Chronic inflammation.

63- Esophageal manifestation :-

A- Heart burn. B- Chest pain.

64- Supra esophageous manifestation of GERD :-

1- Recurrent pharyngitis with helicobacter pylori.

2- Recurrent laryngitis lead to hoarseness of voice and chocking.

65- Globus hystericus :-

66- Pharyngeal pouch :-

Zenker's diverticulum, is where the wall of the oesophagus at the lower pharynx, just above sphincter, balloons out under pressure.

67- What are the causes of difficulty of breathing with normal speech :-

A- Congenital causes	**B- Inflammatory causes**
1- Subglottic stenosis. 2- Subglottic hematoma. 3- Congenital cyst. 4- Laryngomalacia. 5- Bi-vocal cord paralysis.	1- Chronic non-specific hyper-trophic laryngitis. 2- Systemic B.A.

68- The suppuration of the 4 pharyngeal spaces (Clinical picture and how to open):-

	Peri-tonsillar abscess	**Retrao-pharyngeal abscess**	**Para-pharyngeal abscess**	**Ludwig's angina**
Symptoms	1- Severe dysphagia and odynophagia. 2- Throbbing pain referred to ear. 3- Trismus. 4- Torticollis.	1- Fever, headache, malaise, anorexia. 2- Dysphagia (difficulty in suckling and swallowing) 3- Foetororis, drooling 4- Stridor. 5- Torticollis.	1- Fever, headache, Malaise. 2- Severe odynophagia	1- Fever. 2- Headache. 3- Malaise. 4- Severe pain over the floor of the mouth with dysphagia and drooling of saliva.
Signs	1- Swelling of the soft palate. 2- The tonsil is pushed downward and medially. 3- The uvula is edematous and pushed to other side. 4- Enlarged tender L.N.	1- Swelling in the posterior pharyngeal wall limited to one side of the midline. 2- Hyperemia and congestion of the posterior pharyngeal wall. 3- Enlarged tender cervical lymph nodes.	<u>Becc'striade :-</u> 1- External tender swelling on the lateral side of the upper part of the neck. 2- Internal swelling pushing the tonsil medially 3- Trismus.	1- Hard tender neck swelling (involving sub-mental and sub-mandibular regions, first indurated the become fluctuating. 2- The overlying skin is red, hot, and edematous. 3- Swollen edematous floor of mouth with the tongue pushed upwards and backwards. 4- Respiratory obstruction and stridor due to laryngeal edema or upwards Displacement of the tongue.
How to open	Internal incision (most pointing point or mid-point between uvula and last other molar).	<u>Acute :-</u> Internal incision, vertical with head low down. <u>Chronic (Cold abscess)</u> :- External incision along the posterior border of sternomastoid.	External incision along anterior border of sternomastoid.	

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Peri-tonsillar abscess

Symptoms	Signs	How to open
1- Severe dysphagia and odynophagia. 2- Throbbing pain referred to ear. 3- Trismus. 4- Torticollis.	1- Swelling of the soft palate. 2- The tonsil is pushed downward and medially. 3- The uvula is edematous and pushed to other side. 4- Enlarged tender L.N.	Internal incision (most pointing point or mid point between uvula and last other molar).

Retrao-pharyngeal abscess

Symptoms	Signs	How to open
1- Fever, headache, malaise, anorexia. 2- Dysphagia (difficulty in suckling and swallowing) 3- Foetororis, drooling 4- Stridor 5- Torticollis	1- Swelling in the posterior pharyngeal wall limited to one side of the midline. 2- Hyperemia and congestion of the posterior pharyngeal wall. 3- Enlarged tender cervical lymph nodes.	Acute :- Internal incision, vertical with head low down. Chronic (Cold abscess) :- External incision along the posterior border of sternomastoid.

Para-pharyngeal abscess

Symptoms	Signs	How to open
1- Fever, headache, malaise. 2- Severe odynophagia	Becc'striade :- 1- External tender swelling on the lateral side of the upper part of the neck. 2- Internal swelling pushing the tonsil medially 3-Trismus	External incision along anterior border of sternomastoid.

Ludwig's angina

Symptoms	Signs	How to open
1- Fever. 2- Headache. 3- Malaise. 4- Severe pain over the floor of the mouth with dysphagia and drooling of saliva.	1- Hard tender neck swelling (involving sub-mental and sub-mandibular regions, first indurated the become fluctuating. 2- The overlying skin is red, hot, and edematous. 3- Swollen edematous floor of mouth with the tongue pushed upwards and backwards. 4- Respiratory obstruction and stridor due to laryngeal edema or upwards Displacement of the tongue.	

69- Classification of (Rhinitis, Laryngitis and Pharyngitis) :- دكتور شهاب

Inflammation	**Rhinitis**	**Laryngitis**	**Pharyngitis**
Acute specific	Diphtheria	Diphtheria	- Diphtheria - Vincent angina - Moniliasis.
Acute non-specific	- Influenza - Common cold - Acute rhinitis	- Acute epiglottitis - Laryngeo-tracheo-bronchitis - Acute laryngitis	Acute pharyngitis
Chronic specific	- T.B - Leprosy - Syphilis - Rhino-scleroma.	- T.B - Leprosy - Syphilis - Laryngio-scleroma.	- T.B - Leprosy - Syphilis - Pharyngio-scleroma.
Chronic non-specific	- Atrophic rhinitis - Hypertrophic rhinitis.	- Atrophic Laryngitis - Hypertrophic Laryngitis	- Atrophic pharyngitis. - Hypertrophic pharyngitis.

70- Sphenopalatine fossa usually contain angiofibroma origin :-

71- Rhosin molar fossa :-

72- Paralysis of pharynx :-

73- Reink space :-

74- Medial and lateral relation to tonsil (Oral Questions) :-

75- Ulcers of the mouth (Mention the causes of ulcers in the pharynx) (Write it in the way of congenital, traumatic, inflammatory, neoplasm) :-

76- Mention the membranous diseases of the pharynx and mouth :-

77- T.B is located posteriorly in larynx .... Whay :-

4 causes :-

1- The mucosa is folded posteriorly.

2- The mucosa is not firmly adherent to the epiglottitis cartilage.

3- Pyriform fossa (clinically lymph nodes enlargement precede dysphagia).

4- Higher level.

78- F.B (Coin swallowing) :-

Note :-

- **Vocal cord is more important than the epiglottis in protection because it make a complete seal not partial as the epiglottis....**

- **Apple core filling defect and rat tail esophagus appearance in X-ray... When?** (MCQ)

- **Cleft palate** (MCQ)

- **Pyriform fossa carcinoma .....**

  (Early symptoms are the L.N enlargement and pain in the ear)

- **All infection can make perforation in cartilaginous septum EXCEPT One :-**

  Syphilis because it make bone perforation.